Poisonous Outdoor Plants

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Poisonous Outdoor Plants

Introduction

The word poison should suggest a warning rather than create fear. Left alone, certain plants are harmless; however, if crushed or ingested by humans, they may produce upsetting, painful or even fatal results. Certain chemicals on leaf surfaces or in plant juices may be skin irritants and induce reddening, swelling or blistering. Some chemicals effect changes leading to discoloration or light sensitivity.

Potentially irritating chemicals often accumulate in plant storage organs such as seeds and roots. Thus, a small amount of this type of tissue can contain a relatively large amount of toxin. Other plant effects are strictly mechanical and can be irritating because of punctures made by spines or thorns.

All humans can be harmed by some plants; however, the inquisitive child is particularly vulnerable because relatively small amounts of potentially toxic material can cause severe or fatal consequences in a small body. The same volume of material may have little effect on an adult.

A plant need not be eliminated from the garden just because it contains poisonous elements. All that has to be done is to teach children to keep unknown plants and plant parts out of their mouths. Make yourself aware of the potential danger of some plants and pass your knowledge on to your children.

It is impossible to predict how much of each plant needs to be ingested to cause harm because the strength of the toxin may vary with environmental conditions and a person's response may be individualized. Also, much of the information on poisonous plants deals strictly with animals, and quantities ingested are not readily translated into human terms.

Remember too, that plants not commonly thought of as poisonous can become so if ingested in large quantities, such as onions, chives, beets, Swiss chard, borage, rutabaga, broccoli, Brussels sprouts, cabbage and turnips.

Safety Rules

- Avoid eating all plants that have coloured or milky juices such as members of the milkweed, poison ivy, spurge and poppy families. There are exceptions to all general rules; for example, lettuce has milky juice.
- Avoid all unknown white or red fruits. Poison ivy and baneberry have white fruits and are poisonous. Baneberry also has a red-fruited form. Unrecognized fruits should all be treated as potentially toxic.
- Avoid all fruits that are three-sided or three-lobed and thereby eliminate the potential dangers of spurge, horse chestnut, lily, and amaryllis families.
- Avoid eating fruits, seeds, roots and tubers of wild plants as the toxicity of plants is generally greatest in storage organs such as these.
- Avoid all bulbs that do not smell like onions or garlic. Bulbs from members of the lily and amaryllis families can be fatal if eaten in large quantities.

If Poisoning Is Suspected

Seek information by telephoning your doctor, hospital emergency room or poison control centre as soon as possible. Give all the information you can – the name of the plant (preferably the scientific name), the quantity consumed, age and size of the poisoned individual and symptoms displayed. Before you call, have a piece of the plant handy, so you can give an accurate description of it. The doctor or medical service who answers the call will recommend what action you should take.

Booklet Contents

This booklet contains a list of common cultivated and native plants that are poisonous or suspected of being potentially poisonous to humans. Mushrooms, toadstools and fungi have not been included because they are difficult to identify.

Information on livestock poisoning is available in several of the references listed near the end of this booklet. Kingsbury's *Poisonous Plants of the United States and Canada* and the Agriculture and Agri-Food Canada publication *Stock Poisoning Plants of Western Canada* are recommended. You can also find information on poisonous plants online using the Canadian Poisonous Plants Information System available from the Government of Canada.

This list is not meant to provide encyclopedic coverage. Comprehensive reference volumes are available for those who would like to review more extensive lists of edible or potentially toxic plants (see References near the end of this booklet).

Note: Detailed information contained in parentheses in the text at the end of each entry refers to the type of poisoning and the toxic agent (where known). Death is indicated where it has been reported. Symptoms are those produced in humans. Plants are listed according to the first common name recorded for the plant in Moss, E.H., *Flora of Alberta* (1977).

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Garden Plants
Vegetables

Broad Bean, Faba Bean, Horse Bean
Vicia faba

Description: A legume, leaves have 2 - 6 leaflets, flowers dull white with purple spot. Grown for the beans, which are brown/green, purplish or black. Plants grow to 1.5 m.

Poisonous Part: Beans (seeds), raw or cooked, pollen. ***Only certain people are affected.***

Symptoms: "Favism," headache, dizziness, nausea, yawning, vomiting, abdominal pain, elevated temperature, death in some cases. Reactions within minutes after exposure to pollen or within 5 - 24 hours after eating the beans. Affects only certain people, especially those of Mediterranean descent.

Ground Cherry
Physalis longifolia, P. peruviana

Description: An annual in Alberta, grown for its fruit. Produces small yellow fruit in lantern-shaped husks. Plants grow to 1 m; pointed oval leaves are soft and hairy. Flowers are yellow with purple markings.

Poisonous Part: Raw fruit; cooking or preserving destroys toxin.

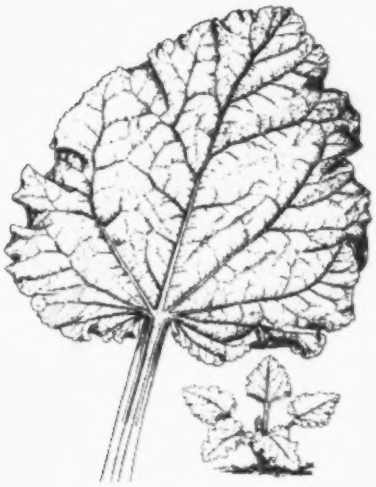
Symptoms: Not yet recorded in humans. Has been known to poison sheep and other animals. (Internal poisoning: unknown)

Potato
Solanum tuberosum

Description: Commonly grown vegetable with the tops (vines) ranging from spreading to upright, usually green. Underground stems produce the edible portion of the plant, the potato tuber. The flowers are white or pink and about 2.5 cm in diameter.

Poisonous Part: Vines, sprouts and skins that have been induced to turn green by exposure to light; spoiled potatoes.

Symptoms: Digestive upset, cold perspiration, lowered temperature, confusion, weakness, numbness, paralysis and death if sufficient quantities ingested. (Internal poisoning: solanine)



Rhubarb

Rheum rhabarbarum

Description: A deep-rooted perennial grown for its large thick leaf stalks, which are stewed or used for pies and sauces. The underground portion consists of large, fleshy and somewhat woody rhizomes and a fibrous root system. Leaves are 30 - 75 cm long and have large veins that join at the base of the leaf. A popular food since it is available early in the season.

Poisonous Part: Leaves are poisonous; leaf stalks are edible.

Symptoms: Severe abdominal cramps, nausea, weakness, drowsiness, vomiting, internal bleeding, convulsions and death if sufficient quantities eaten. Can cause poisoning in livestock. (Internal poisoning: oxalic acid and soluble oxalates)

Tomato

Lycopersicon esculentum

Description: A common, strong-smelling vegetable grown in Alberta as an annual or a short-lived perennial in a greenhouse. The stems are spreading, round, soft and hairy when young but become angular and hard when older. Leaves can be 10 - 30 cm long and are divided into 7 - 9 leaflets. Yellow, usually nodding, well-shaped flowers are borne on clusters on the stem between leaves. The green fruit turns red when ripe.

Poisonous Part: Leaves, stems.

Symptoms: Nausea, vomiting, abdominal pains, constipation or bloody diarrhea, sluggishness, salivation, labored breathing, trembling, weakness, loss of feeling, paralysis, death. (Internal poisoning: steroid alkaloids)

Garden Plants
Flowers

Autumn Crocus
Colchicum autumnale

Description: This crocus-like, bulbous plant is commonly grown for its showy purple flowers, appearing without leaves in the fall. Often advertised for indoor forcing. Has 3 - 8 leaves, 20 - 25 cm long and 3 cm wide.

Poisonous Part: All parts, especially bulbs.

Symptoms: Irregular heartbeat, confusion, burning sensation, nausea, diarrhea, weakness, death. Can cause poisoning in livestock. (Internal poisoning: colchicine)

Black Nightshade
Solanum nigrum

Description: A weedy annual with clusters of small white flowers and green berries turning black or yellow when ripe. Related to the tomato. The leaves may be hairy. Included in the flower garden section because the plant is more toxic to humans than those contained in the field plants section. ***Highly toxic.***

Poisonous Part: All parts, including immature fruit; ripe berries are edible.

Symptoms: Nausea, vomiting, abdominal pains, constipation, or bloody diarrhea, sluggishness, salivation, labored breathing, trembling, weakness, loss of feeling, paralysis, death. Can cause poisoning in livestock. Symptoms include laboured breathing, convulsions, pupil dilation and death. (Internal poisoning: solanine)

Bleeding Heart
Dicentra spp.

Description: Both the common Bleeding Heart (*D. spectabilis*) and the Pacific or Western Bleeding Heart (*D. Formosa*) are commonly grown perennials in Alberta (about 1 m and 30 cm tall, respectively). They are often used in shade where they will bloom profusely. Foliage is finely divided and has a 'bloom' on both surfaces. Flowers are heart-shaped, rose to pink with white centres; they appear in spring and hang from a long, arching, leafless main stem.

Poisonous Part: All parts.

Symptoms: Trembling, loss of balance, weakness, difficulty in breathing, convulsions. (Internal poisoning: isoguinoline – structured alkaloids)

Bracken Fern, Brake

Pteridium aquilinum

Description: A coarse fern, up to 1.5 m tall. Dark brown, branched rhizomes (horizontal roots). The stiff fronds (leaves) are somewhat fan-shaped and the mid-rib is often hairy. Found in wooded, mountain areas.

Poisonous Part: All parts green or dry. The rhizome is most poisonous.

Symptoms: Sometimes mistakenly eaten as fiddleheads. Poisoning unlikely though because the enzyme is destroyed by heat. Causes a thiamine deficiency. Has been known to cause sickness and loss of cattle in Canada. (Internal poisoning: enzyme thiaminase)

Castor Bean

Ricinus communis

Description: As a foliage plant, this annual can grow taller that 2 m. The 5 - 11 lobed leaves may be 1 m across and vary from green to bronze depending on the cultivar. Stems have watery juice. Spiny seed pods grow in clusters, enclosing glossy mottled black, brown and white seeds. Poisoning can be prevented by removing the flower heads before they completely form. ***Highly toxic***.

Poisonous Part: Seeds, foliage, young seedlings.

Symptoms: Handling leaves and seeds may cause itching rash to broken blisters, chewing plant parts causes burning in mouth, throat and stomach, loss of appetite, abdominal pain, vomiting, dullness, diarrhea, thirst, convulsion, death. Can cause poisoning in cattle. (Dermatitis and internal poisoning: ricin)

Coneflower, Black-eyed Susan

Rudbeckia spp.

Description: This group of plants includes a number of herbaceous ornamentals. Poisoning of livestock has been reported for the golden-glow coneflower (*R. laciniata cv. florepleno)* and the gloriosa daisy (*R. hirta*). *R. hirta* also grows wild in Alberta and is often known as the common black-eyed Susan. The golden glow coneflower is a 1.5 m spreading plant with attractive double yellow flowers in August and September. The common black-eyed Susan produces flowers 5 cm across in shades of yellow and maroon.

Poisonous Part: All parts.

Symptoms: Poisoning in humans not reported, only in cattle and horses. Large amounts need be ingested to cause harm. (Potential internal poisoning)

Daffodil, Narcissus

Narcissus spp.

Description: Daffodils are bulbous plants widely cultivated for their white, yellow and combined yellow and white flowers that appear in early spring. There are one or more flowers on a long, hollow stalk. Leaves are green, flat and strap-shaped.

Poisonous Part: All parts, especially bulbs.

Symptoms: Nausea, severe stomach and intestinal upset, vomiting, diarrhea, trembling, stupor, itchiness, convulsions, death. Can cause poisoning in cattle with symptoms including convulsions, drowsiness and gastroenteritis. (Internal poisoning: alkaloids)

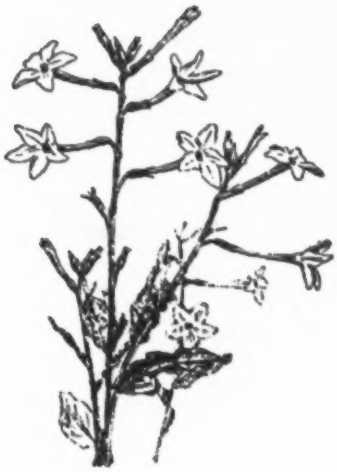
Delphinium, Larkspur

Delphinium spp.

Description: A group of about 250 annual or perennial plants from 0.6 - 2 m tall that produce spikes of white, blue, purple and pink flowers. Each flower has a spur that projects backwards. Foliage is lightish green and finely divided in a finger-like fashion. Not all species are equally toxic.

Poisonous Part: All parts, young plants and seeds especially.

Symptoms: Nausea, abdominal cramps, bloating, twitching muscles, paralysis, death. Has been known to cause poisoning in cattle with symptoms including constipation, paralysis, weakness and salivation. (Internal poisoning, dermatitis: diterpenoid alkaloids)



Flowering Tobacco

Nicotiana alata

Description: Herbaceous annuals valued for their rapid growth, large leaves and showy flowers. All species of *Nicotiana* are poisonous; however, *N. alata* is the most commonly cultivated garden tobacco. Stem and leaves are sticky and hairy. Flowers are fragrant, tubular and come in many colours.

Poisonous Part: All parts.

Symptoms: Twitching muscles, rapid heartbeat, staggering, weakness, blindness, nausea, vomiting, diarrhea, abdominal pains, death. (Internal poisoning: nicotine)

Foxglove

Digitalis purpurea

Description: A tall-growing (up to 1.5 m) biennial that produces tall spikes of trumpet-shaped flowers of various colours often spotted inside. Leaves are spaced alternately on the stem, are hairy and remain green throughout the winter. One of the original sources of the drug digitalis.

Poisonous Part: All parts.

Symptoms: Nausea, diarrhea, abdominal pain, headache, confusion, blurred vision, trembling, drowsiness, irregular heartbeat, convulsions, death. Can cause poisoning in cattle. (Internal poisoning: cardiac glycosides)

Gas Plant

Dictamnus albus

Description: An uncommon garden perennial growing 60 cm to 1 m tall. Leaves are glossy and strong smelling; leaflets are about 7.5 cm long, with 9 - 11 leaflets per leaf. Has spikes of white or pink flowers.

Poisonous Part: All parts, especially seed pods and plant juices.

Symptoms: Irregular reddish patches on the skin, blistering and staining of the skin, which may persist for several weeks. (Dermatitis)

Goldenrod

Solidago spp.

Description: This group of plants contains several species commonly grown in the garden (*S. canadensis* and *S. missouriensis*) and several native species. They can be 1 - 1.5 m tall and produce many small heads of deep yellow flowers on tall stalks in late summer to early fall. Leaves are long and narrow, may have toothed margins.

Poisonous Part: All parts.

Symptoms: Poisoning of humans not reported; however, losses of horses, cattle and sheep have been noted. (Internal poisoning: resinous compounds)

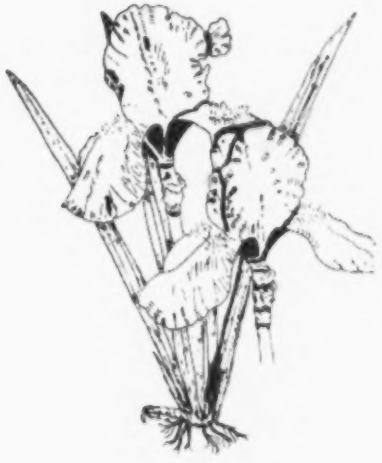
Hyacinth

Hyacinthus orientalis

Description: A perennial, spring flowering bulb with long, narrow leaves. The flowers, in a cluster on a stalk, may be white, yellow, pink, red or blue. Sometimes sold as an indoor flowering bulb.

Poisonous Part: All parts can cause sickness; the bulb is most toxic.

Symptoms: Intense stomach cramps, nausea, vomiting, diarrhea. (Internal poisoning: alkaloids. Dematitis in sensitive people)



Iris

Iris spp.

Description: This common garden plant can grow anywhere from 30 cm to 1.5 m tall depending on the species. Flower colours: white, pink, orange, brown, yellow, blue and violet. The leaves are long, erect, sword-like and are produced from thick, fleshy horizontal rootstocks.

Poisonous Part: Leaves, rhizomes, plant juices.

Symptoms: Nausea, vomiting, diarrhea. Has been known to cause abdominal pain, blistering, diarrhea, death and mouth irritation in cattle. (Internal poisoning: irisin)

Lily-of -the-valley

Convallaria majalis

Description: A common garden perennial or ground cover grown for its attractive green foliage and sweet-scented, white, nodding, cup-shaded flowers in spring. Spreading habit of growth by underground rootstocks. The leaves are broad, oval and shiny and are produced in pairs. The flowering stems arise between the leaves.

Poisonous Part: All parts.

Symptoms: Irregular heartbeat, nausea, confusion, pupil dilation, headache, circulatory collapse, death. (Internal poisoning: convallarin, convallamarin)

Lobelia

Lobelia spp.

Description: Numerous poisonings by species of lobelia have been reported where the plants have been used in medicinal preparations. The flowers can be pink, white or blue. An annual bedding plant, mound forming or trailing; *L. erinus* is most common. Usually less than 20 cm tall, the narrow leaves are 1 - 2.5 cm long.

Poisonous Part: All parts.

Symptoms: Vomiting, weakness, tumors, coma. (Internal poisoning: a-lobeline)

Lupine

Lupinus spp.

Description: Lupines grow wild, and both annuals and perennials are cultivated in gardens where they grow to approximately 60 cm to 1 m in height. Pea-like flowers are produced in spikes and may be blue, pink, red, yellow or apricot and may be bicoloured. Each leaf consists of many leaflets arranged like fingers on a hand. Some, but not all lupines are toxic.

Poisonous Part: all parts, especially seeds.

Symptoms: Ingestion of a relatively large quantity of lupines over a brief time is generally required. Symptoms include difficulty breathing, twitching, convulsions, unconsciousness, death. Has been known to cause poisoning and death in cattle, sheep, goats and horses. (Internal poisoning: alkaloids)

Monkshood

Aconitum spp.

Description: A showy perennial that grows to about 1.5 m high and flowers in late summer and early fall. Tall, showy upright spikes of helmet-shaped flowers are produced in tones of blue, violet and purple. Has tuber-like roots. The leaves are glossy, dark green and are arranged like fingers on a hand, resembling the foliage of its close relative the delphinium or larkspur. *A. napellus* is the common garden plant, and *A. delphinium* is a native perennial found in the Rocky Mountains, Coalspur, Jasper and northwards.

Poisonous Part: All parts, especially roots and seeds.

Symptoms: Restlessness, salivation, weakness, heartbeat irregularity, nausea, dizziness, anxiety, speech and vision impairment, death if sufficient quantities ingested. (Internal poisoning: alkaloids)

Morning Glory

Ipomoea spp.

Description: Vining, herbaceous, annual plant. Leaves are heart-shaped. Tubular flowers may be single or multi-coloured, usually white, blue or red. Four to six seeds in a capsule.

Poisonous Part: Seeds

Symptoms: Hallucinogenic reactions when 50 or more seeds are eaten. Nausea, digestive upset, blurred vision, mental confusion, low blood pressure, coma. (Internal poisoning: amides of lysergic acid)

Pheasant's Eye

Adonis spp.

Description: Several species of this genus are sometimes cultivated in gardens: spring adonis (*A. vernalis*) and Amur adonis (*A. amuriensis*). Both plants are about 45 cm tall. The fern-like leaves are 8 - 15 cm wide and long. The flowers, one per stem, are produced in early spring.

Poisonous Part: All parts.

Symptoms: Poisoning of humans has not been reported; however, losses of livestock have been noted. (Internal poisoning: adonidon)

Poppy

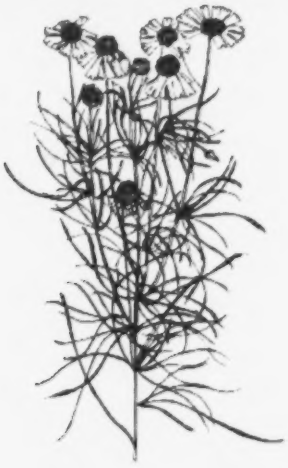
Papaver spp.

Description: The Iceland poppy (*P. nudicaule*) and the oriental poppy (*P. orientale*) are commonly grown in Alberta. The latter is not known to be poisonous; however, all poppies should be treated as potentially harmful unless proven otherwise. Several poppies also grow wild. Tissue-thin poppy flowers are about 10 cm across in white, orange, red, deep pink and yellow.

P. nudicaule has deeply cut leaves, and the stem is very hairy. *P. orientale* has entire leaves, and the stem is smooth. Both produce a milky sap. It is illegal to grow the opium poppy (*P. somniferum*) in this country because opium and its derivatives – heroin and morphine – are gathered from the juice of raw seeds.

Poisonous Part: All parts, especially raw, green seeds; ripe poppy seeds are harmless.

Symptoms: Eating unripe fruit – deep sleep, dizziness, delirium, slow breathing, death. Poisoning and addiction from opium and its derivatives are common. Eating other parts – nausea, vomiting, stomach pains, twitching muscles. Has been known to cause bloat, muscle spasms and restlessness in livestock. (Internal poisoning: alkaloids)



Sneezeweed, Bitterweed

Helenium autumnale

Description: Grown as a cultivated flower (not popular) and exists as a wildflower. It is a coarse, 0.6 to 1.2 m tall, late-blooming member of the daisy family. The stems usually branch near the top of the plant. Flowers of the native plants are yellow; introduced cultivars can have yellow, red or yellow and maroon flowers. The alternate, nearly smooth leaves are usually lance-shaped, but some are as thin as grass.

Poisonous Part: All parts.

Symptoms: Symptoms in humans not reported; however, poisoning noted in livestock with symptoms including laboured breathing, convulsions and frothing of the mouth in cattle. (Internal poisoning: dugaldin)

Squill, Scilla

Scilla spp.

Description: Early spring flowering bulbs about 15 cm tall, producing small blue, nodding blooms. The two scillas known to be toxic are not hardy in Alberta; however, it is wise to consider the scillas *S. sibirica,* Siberian squill, and *S. bifolia,* two-leafed squill, as potentially harmful. A closely related plant *Urginea maritima,* sea onion, is used in making rat poison.

Poisonous Part: All parts, especially the bulb.

Symptoms: Nausea, diarrhea, abdominal pain, headache, confusion, blurred vision, trembling, drowsiness, irregular heartbeat, convulsions, death. (Internal poisoning: cardiac glycosides)

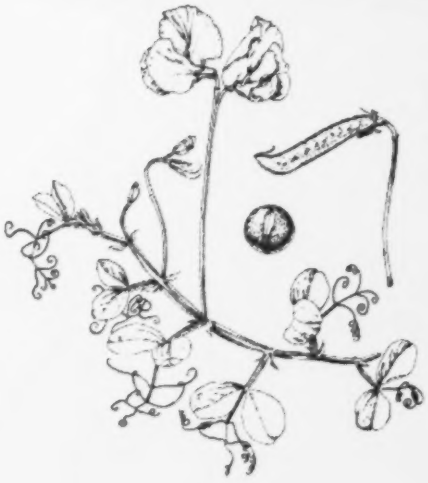
Star-of-Bethlehem, Snow Drop

Ornithogalum umbellatum

Description: A spring-flowering bulb that produces long, narrow (15 x 0.8 cm) bright green leaves. White, star-shaped flowers grow in clusters of 5 - 20.

Poisonous Part: All parts.

Symptoms: Depression, salivation, vomiting, diarrhea, labored breathing, rapid pulse, bloody urine, death. (Internal poisoning: cardiac glycosides)



Sweet Pea, Perennial Pea

Lathyrus odoratus, L. latifolius

Description: Both plants are tall growing vines (2 m) that produce a multitude of flowers in clusters of usually 3 - 5 along their stems. The stems are angular and winged. The sweet pea (*L. odoratus*), grown as an annual in Alberta, has fragrant flowers in many colours. Seeds are borne in hairy pods. The perennial pea (*L. latifolius*) is perennial if grown in a protected location. The flowers are rose or white, and the pods are 8 - 12 cm long.

Poisonous Part: Seeds.

Symptoms: Ingestion of large amounts is necessary to induce the following symptoms; prickly sensation, cramps, lameness, paralysis, death. (Internal poisoning: beta-gamma-L-glutamyl-aminopropionitrile in sweet pea and L-alpha, gamma-diaminobutyric acid in perennial pea)

Tansy

Tanacetum vulgare

Description: A common roadside weed easily recognized by its strong aromatic scent when handled and by its flat-topped clusters of hard button-shaped yellow flowers. The fern-like foliage is almost hairless and has small dots or pits. At one time, grown as a savory herb. A large quantity of leaves would have to be eaten to cause poisoning; however, death has been noted after ingesting a "medicinal" extract prepared from the plant.

Poisonous Part: All parts.

Symptoms: Convulsions, violent spasms, dilated pupils, rapid and feeble pulse, death. (Internal poisoning: tanacetin)

Wild Tomato

Solanum triflorum

Description: A common, low-spreading annual weed related to the tomato. The leaves have deep, rounded lobes and are slightly hairy. White flowers are in groups of 1 - 3. The fruits resemble small (2.5 cm) green tomatoes.

Poisonous Part: Leaves, berries.

Symptoms: Nausea, vomiting, abdominal pains, diarrhea, sluggishness, salivation, labored breathing, trembling, loss of feeling, paralysis, death. (Internal poisoning: solanaceous alkaloids)

Trees and Shrubs

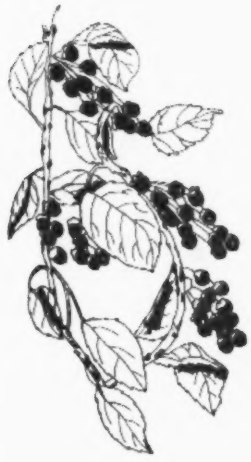
Apple

Malus spp.

Description: small, round-headed deciduous trees grown for their large fruit: apples. The simple leaves often have fine downy hairs, and the margins are toothed. The bark of young shoots is usually downy.

Poisonous Part: Foliage, seeds.

Symptoms: Abdominal pains, nausea, vomiting, death. (Internal poisoning: cyanogenetic glycosides)



Bittersweet

Celastrus scandens

Description: A coarse-looking, woody, deciduous climbing vine sometimes encountered in cultivation. The leaves are about 10 cm long, alternate and oval. The greenish, yellowish or white flowers are borne in clusters and later develop orange-yellow fruit capsules with crimson seeds.

Poisonous Part: Leaves, seeds, roots.

Symptoms: Vomiting, diarrhea, chills, weakness, convulsions, coma. (Internal poisoning: unknown)

Buckthorn

Rhamnus spp.

Description: Deciduous shrubs, found in Alberta. *R. alnifolia* is a native shrub found in low shaded woods. Common buckthorn (*R. cathartica*) and the glossy buckthorn (*R. frangula*) are grown as ornamentals. The latter have been reported to adversely affect humans when large quantities of the fruit are eaten. The simple leaves may be dull or shiny green and have obvious parallel veins. The flowers are greenish yellow or white. The small fruits have a stone in the centre and turn black when ripe. *R. cathartica* is spiny.

Poisonous Part: Fruit, bark.

Symptoms: Muscle spasms, stomach upset and laxative effects. (Internal poisoning: glycosides)

Burning Bush

Euonymus spp.

Description: Species and cultivars of this genus grown as ornamental bushes, vines and groundcovers. *E. atropurpureus* and *E. europaeus* are frequently cited as poisonous plants; however, they are not hardy in Alberta. Treat other Euonymus species that are hardy and grown in Alberta with caution. The stems are usually four-sided and may be winged. The simple leaves often have many fine teeth and may be very narrow. The flowers are small and greenish. The seeds have a pink-scarlet fleshy cover.

Poisonous Part: Leaves, bark, fruit.

Symptoms: Vomiting, diarrhea, convulsions, hallucination. (Internal poisoning: unknown)

Caragana

Caragana arborescens

Description: A common ornamental shrub or small tree used as specimen plants or in hedges. The fernleaf and weeping caraganas are named cultivars of *C. arborescens*. Caraganas are legumes and have 6 - 12 rounded leaflets/leaf. Yellow flowers bloom in spring. Seeds are enclosed in 4 - 5 cm long pods.

Poisonous Part: Seeds.

Symptoms: Vomiting, diarrhea, (Internal poisoning: unknown)

Clematis, Virgin's Bower

Clematis spp.

Description: A woody climber grown for its showy flowers and feathery fruit. Leaves have 3 - 7 leaflets, and the edges are often serrated. It usually kills back each winter, but can grow 2 m a season under good conditions. There is also a native clematis, rarely seen in cultivation. Ornamental types usually have purple-rose coloured flowers.

Poisonous Part: All parts.

Symptoms: Stomach upset, nervous condition, depression, death. (Internal poisoning: protoanemonin)

Daphne

Daphne spp.

Description: A group of small woody shrubs, the largest not over 1.1 m and the smallest not over 30 cm in height. Several daphnes are found in cultivation in Alberta. Daphne flowers are small and showy and can be either lilac, pink or yellow. They grow in stalkless groups of three, bloom before the leaves come out and are 1 cm or less long. Leaves are thin, ovalish and 5 - 8 cm long, ***Highly toxic***. Greatest danger lies in the attractive appearance of the berries to children. The one-seeded, round fruit is about 0.5 cm in diameter, leathery and scarlet-coloured.

Poisonous Part: All parts.

Symptoms: Blisters on skin, burning of mouth, throat and stomach, stupor, weakness, convulsions, vomiting, diarrhea, coma, death. (Internal poisoning: dihydroxycoumarin-type glycosides)

Elder

Sambucus spp.

Description: Shrubs with either loose, open or compact habits of growth, 1.3 m to 2.6 m tall. Branches of all species are stout and pithy, and flowers are small, white and borne in clusters at the ends of branches. The fruit, growing in clusters, may be blue, purple or red and have a small pit.

Poisonous Part: All parts, roots and especially berries; harmless when cooked.

Symptoms: Nausea, vomiting, diarrhea. (Internal poisoning: alkaloids and glycosides)

Hydrangea

Hydrangea spp.

Description: Medium-sized, coarse-textured, deciduous ornamental shrubs. Leaves 7 - 15 cm long, shiny green above and lighter green below. The large clusters of white flowers grow in June or July. The pot hydrangea sold by florists is also poisonous.

Poisonous Part: All parts.

Symptoms: Abdominal pains, nausea, vomiting, death. (Internal poisoning: cyanogenetic glycosides)

Juniper

Juniperus spp.

Description: Low spreading evergreen shrubs growing wild or planted as ornamentals. Has needle-like leaves, often bluish green. The berries are purple-blue with a waxy bloom.

Poisonous Part: Berries

Symptoms: Digestive upset. (Internal poisoning: unknown)

Oak

Quercus spp.

Description: Deciduous trees with a long oval silhouette, horizontal branches, mature height about 10 m. Leaves are dark green and deeply-lobed. The fruit is the common acorn. The only oak commonly grown in Alberta is bur oak (*Q. macrocarpa*). The bur oak has very rough bark, and the stiff leaves turn muddy brown in autumn.

Poisonous Part: Leaves, unleached acorns.

Symptoms: Symptoms in humans not recorded but has been known to cause death in animals. A large number of acorns would have to be eaten to cause harm. (Internal poisoning: possibly annic acid)

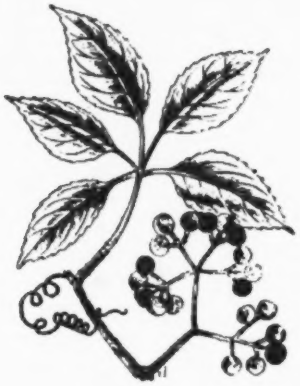
Ohio Buckeye, Horsechestnut

Aesculus glabra

Description: A small (approx 8 m), round-headed tree. Has large compound leaves with 5 - 7 leaflets arranged like the fingers on a hand, each about 10 - 15 cm long and hairless on both sides. The flowers are greenish-yellow and are produced in upright clusters. The large fruit is a spiny capsule, enclosing 1 - 2 shiny brown seeds. The closely related horsechestnut (*A. hippocastanum*) is also potentially harmful. However, the horsechestnut is not usually found in the northern part of Alberta and occurs only rarely in southern Alberta

Poisonous Part: All parts, especially mature fruit.

Symptoms: Vomiting, diarrhea, weakness, lack of body control, stupor, dilated pupils, paralysis, death. (internal poisoning: aesculin)



Virgina Creeper

Parthenocissus quinquefolia

Description: A hardy, deciduous, ornamental climber belonging to the grape family. Leaves are large, coarse and compound with up to five 15 cm long leaflets. The leaves are dull green on top and paler below. The fruit is a small blue berry borne in grape-like clusters.

Poisonous Part: Berries, leaves.

Symptoms: Evidence for poisoning by this plant is circumstantial in that it is believed, but not proven, that ingestion has caused death of children. It should be regarded with suspicion. (Internal poisoning: unknown)

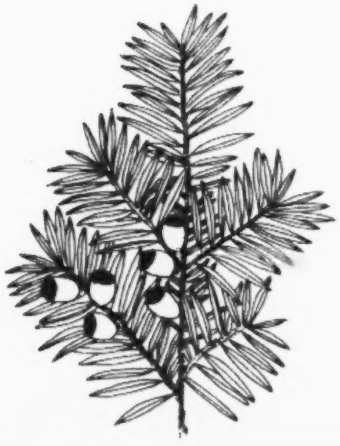
Wild Cherries

Prunus spp.

Description: Numerous members of the cherry family grow in Alberta; however, the poisonous ones to note are pincherry (*P. pensylvanica*), chokecherry (*P. virginiana*) and the purple-leaved Shubert chokecherry (*P. virginiana cv. Shubert*). The pincherry and chokecherry grow wild or can be in cultivation whereas the Shubert chokecherry is only found in cultivation. The trees are small (pincherry to 6 m, chokecherry to 3 m) have smooth, shiny, dark brown bark and produce stalks of white flowers in June. Seeds of the closely related peach and apricot plants are also poisonous.

Poisonous Part: All parts, fruit safe if pits removed.

Symptoms: Abdominal pains, nausea, vomiting, coma, sweating, lethargy. Can cause laboured breathing, death and muscle spasms in cattle and horses. (Internal poisoning: cyanogenetic glycosides)



Yew

Taxus spp.

Description: In Alberta, dwarf coniferous plants with attractive dark green, often glossy foliage. The fruit is berry-like, about 1 cm in diameter and coral to deep pink. Not often grown as an ornamental but sometimes found in evergreen woods. ***Highly toxic***.

Poisonous Part: All parts, the fleshy red covering around the seed is not especially toxic.

Symptoms: Vomiting and diarrhea, trembling, difficulty in breathing, weakness, convulsions, coma. Can cause poisoning in livestock. (Internal poisoning: the alkaloid taxine)

Field Plants

This section lists a variety of plants, many of them considered weeds that are known to cause livestock poisoning. Livestock poisoning can occur easily because the animals often ingest large quantities when grazing or when being fed hay or silage.

Many of the plants listed below have not been known to cause human poisoning. However, as more urban people unfamiliar with wild plants spend more of their time getting back to nature, the potential for human poisoning increases.

In most cases, large quantities of the plant need to be ingested to cause poisoning. Livestock are also susceptible to poisoning by some plants that are able to accumulate toxic materials such as nitrates and selenium; however, these plants are not listed here.

Plant	Poisonous Part	Type of Poisoning/Toxic Agent
Arrowgrass *Triglochin maritima* and *T. palustris*	All parts	Internal poisoning: cyanogenetic properties
Bahia *Bahia oppositifolia*	Foliage	Internal poisoning: cyanogenetic glycoside
Black henbane *Hyoscycamus niger*	All parts, especially roots	Internal poisoning: several alkaloids (mainly hyoscyamine)
Bittersweet (climbing nightshade) *Solanum dulcamara*	Immature fruit, leaves	Internal poisoning: solanine
Buttercup *Ranunculus spp.*	All parts, except seeds; toxicity lost on drying.	Internal poisoning: dermatitis/ protoanemonin
Cocklebur *Xanthium strumarium*	Seeds, seedlings	Internal poisoning: hydroquinone
Docks, sorrels *Rumex spp.*	Leaves, stems	Internal poisoning: soluble oxalates
Dogbane family		
Indian hemp *Apocynum cannabinum*	All parts	Internal poisoning: resins and glycosides (primarily cymarin)
Spreading dogbane *Apocynum androsaemifolium*	All parts, especially rhizomes	Internal poisoning: resins and glycosides (primarily apocynamarin)
False ragweed *Iva xanthifolia*	Leaves	Dermatitis
Field bindweed (Wild morning glory) *Convolvulus arvensis*	Seeds	Internal poisoning
Golden bean *Thermopsis rhombifolia*	Seeds, leaves	Internal poisoning: quinolizidine alkaloids
Greasewood *Sarcobatus vermiculatus*	All parts	Internal poisoning: soluble oxalates
Green tansy mustard *Descurainia pinnata*	All parts	Internal poisoning: unknown
Ground ivy *Glechoma hederacea*	All parts	Internal poisoning: volatile oils

Plant	Poisonous Part	Type of Poisoning/Toxic Agent
Groundsels *Senecio integerrimus, S. vulgaris*	All parts	Internal poisoning: pyrrolizidine alkaloids
Jimson weed (thorn apple) *Datura stramonium*	All parts, especially seeds and leaves	Internal poisoning: solanaceous alkaloids
Locoweeds and milk vetches *Oxytropis* and *Astragalus* spp.	All parts	Internal poisoning: locaine
Mallow *Malva parviflora*	All parts	Internal poisoning: malvalic and sterculic acids
Milkweeds *Asclepias spp.*	All parts	Internal poisoning
Mustard family		
Black mustard *Brassica nigra*	All parts	Internal poisoning: isothiocyanates
Canola (rapeseed) *Brassica napus*	All parts, raw and in large quantities	Internal poisoning: isothiocyanates
Indian mustard *Brassica juncea*	All parts	Internal poisoning: isothiocyanates
Wild mustard *Brassica kaber*	Seed or podded plants	Internal poisoning: isothiocyanates
Wormseed mustard *Erysimum cheiranthoides*	Seeds	Internal poisoning: allyl isothiocyanate
Pasque flower (prairie crocus) *Anemone patens*	All parts	Internal poisoning: ranunculin
Prickly lettuce *Lactuca serriola*	Young fresh plants are poisonous; mature plants and young stages after drying appear to be non-toxic.	Internal poisoning: unknown
Ragweed *Ambrosia* spp.	Pollen	Hay fever
Sagebrush *Artemisia* spp.	All parts	Internal poisoning:unknown
Silverleaf psoralea *Psoralea argophylla*	Seeds	Internal poisoning
Spurges *Euphorbia* spp.	Sap	Dermatitis, internal poisoning
Stinkweed *Thlaspi arvense*	Seed, leaves	Internal poisoning: allyl isothiocyanate
Tarweed (fiddleneck) *Amsinckia* spp.	Seeds	Internal poisoning: unknown liver toxin
Viper's bugloss (blueweed) *Echium vulgare*	Bristly hairs on leaves and stems	Dermatitis

Forest Plants

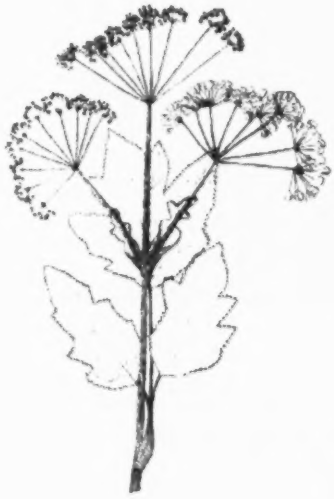
Baneberry

Actaea spp.

Description: A perennial herb with large, attractive compound leaves and with scores of very small white flowers forming a cone-shaped cluster at the end of each leafy stem. The flowers are replaced by waxy red or white berries at summer's end. The veins are often hairy on the back of the leaf.

Poisonous Part: All parts, especially roots and berries.

Symptoms: Increased pulse, dizziness, abdominal pains. Can cause poisoning in livestock. (Internal poisoning: an unnamed essential oil)



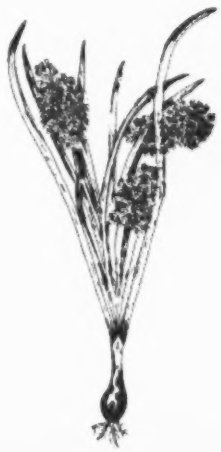
Cow Parsnip

Heracleum lanatum

Description: A coarse perennial herb, 1 - 2 m tall with large hairy heart-shaped leaves. Small white flowers produced in large flat-topped clusters. The leaf stem is wide where it is attached to the main stem. The fruit is flat, winged and has dark lines (oil tubes). Grows in damp wooded areas. **Note**: May be confused with water parsnip or the highly toxic water hemlock.

Poisonous Part: Leaves.

Symptoms: Minor skin irritation to painful blistered inflammation in humans and livestock. (Dermatitis)



Death Camas

Zygadenus spp.

Description: Two species of the bulbous death camas family grow in Alberta: the death camas (*Z. gramineus*) and the white camas (*Z. elegans*). The white camas grows in moist wooded places and is much less toxic than the highly toxic death camas, which commonly grows in plains and hillsides. Leaves are long, narrow and grass-like and gathered around the base of the stem. The tall stem is topped with a branched cluster of greenish to yellowish-white flowers. Both have glands at the base of the flowers.

Poisonous Part: All parts, especially leaves and bulbs.

Symptoms: Abdominal pain, nausea, vomiting, trembling, muscular weakness, difficult breathing, lowered body temperature, coma, death. Can cause poisoning in livestock. (Internal poisoning: alkaloids)

Devil's Club

Oplopanax horridum

Description: A coarse perennial shrub, 1 - 3 m high, occurring at scattered points along the east slope of the Rocky Mountains and also in the region of Lesser Slave Lake. It is distinguished by a single, thick stem armed with long, sharp, poisonous spines. Has an abundance of large maple-like leaves 5 - 7 lobes, 10 - 30 cm wide, covered with equally sharp spines along the underside. The minute greenish-white flowers are crowded in a dense cluster at the end of the stem and are replaced with a cluster of inedible red berries.

Poisonous Part: Spines along leaf stalk and leaf veins.

Symptoms: Painful wounds, swelling. (Dermatitis)

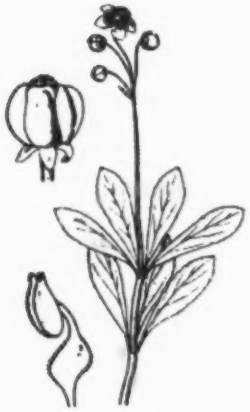
Poison Ivy

Rhus radicans

Description: Poison ivy is a low (10 - 40 cm), somewhat sprawling shrub that grows in most ravines, shady woods and along river flats and streamsides, not common in Alberta. It is easily recognized by its compound leaves of three green drooping leaflets, 3 - 15 cm long. Has tight clusters of small yellowish-green flowers that are followed by showy bunches of dull, white, round, hard berries. In autumn, poison ivy leaves are a brilliant red.

Poisonous Part: All parts.

Symptoms: Burning, itching rash to broken blisters: in severe cases, the infection covers the entire body producing swelling and fever: death has occurred occasionally. (Dermatitis, internal poisoning: urushiol)



Prince's Pine

Chimaphila umbellata var. occidentalis

Description: A medium-sized shrub with slightly woody, many branched stems. Leaves are thick, shiny, evergreen and 2 - 7 cm long with fine serrations along most of the edge. Leaves are often in whorls of 3 - 8. Also produces white or purplish fragrant flowers in a cluster. Found mainly in southern Alberta, in dry woods.

Poisonous Part: Leaves and stems.

Symptoms: Minor skin irritation to painful blistered inflammation. (Dermatitis)

Trillium

Trillium spp.

Description: A small, flowering, bulbous plant that produces all parts (leaves, petals and sepals) in groups of three. Flowers are 3 - 7.5 cm long, and their colour varies from white to pink depending on species. An uncommon native plant that grows in shady forests, sometimes grown as an ornamental.

Poisonous Part: Rootstocks.

Symptoms: Violent vomiting. (Internal poisoning)

Marsh Plants

Common Cattail

Typha latifolia

Description: A common weed easily recognized by its iris-like leaves (erect, 1 - 2 cm wide green blades) and its fat, cigar-shaped, brown spike of densely packed wooly fibres. Stems 1 - 2 m tall, grows in marshy areas.

Poisonous Part: Leaves, stems.

Symptoms: Symptoms in humans not reported. It has been known to kill horses.

Glandular Labrador Tea

Ledum glandulosum

Description: An erect, 0.5 m tall shrub. Stems are upright, many branched and have small glands. The oval leaves are 1.5 - 4 cm long, yellow-green and grainy beneath. Has clusters of small, five-petalled white flowers. The common Labrador tea (*Ledum groenlandicum*) may also possess irritating qualities if consumed in large quantities. These leaves are covered with dense, rusty hairs. Side effects from drinking too much 'tea', a drink often made from dried leaves, have been reported.

Poisonous Part: Leaves.

Symptoms: Not documented. Death of sheep has been reported. (Internal poisoning)

Horsetail

Equisetum spp.

Description: Small herbaceous perennials, the stems are rush-like, often hollow and of harsh texture. The plant appears to have no leaves; however, the stems and branches are green. Some horsetails have many branches in whorls; others form an erect, unbranched pencil-like stem. The head is cone-shaped. Grows in damp areas.

Poisonous Part: All parts

Symptoms: Symptoms in humans not known. Livestock deaths have been reported from ingestion of this plant. (Internal poisoning: unknown)

Marsh Marigold

Caltha palustris

Description: A thick, hollow-stemmed marsh plant 20 - 60 cm tall. The stem branches near the top. Produces round or kidney-shaped deep green leaves. The leaf stems become shorter towards the top of the plant. Sprays of brilliant golden-yellow flowers appear early in May.

Poisonous Part: All parts, young plants not poisonous.

Symptoms: irritation and inflammation of the stomach and intestines, salivation, diarrhea, abdominal pain, convulsions. (Internal poisoning: protoanemonin)

Mountain Laurel, Hog Laurel

Kalmia polifolia var. microphylla

Description: A small woody bush, about 5 - 20 cm tall. Stems have few branches and are hairless with a 'bloom'. The leaves are 0.5 - 1.0 cm long, evergreen and white underneath. The flowers are rose coloured and showy. Found in boggy areas in the Rocky Mountains and northern Alberta.

Poisonous Part: All parts.

Symptoms: Watering of the mouth, eyes and nose, loss of energy, slow pulse, vomiting, low blood pressure, lack of co-ordination, convulsions, paralysis of arms and legs, coma, death. (Internal poisoning: andromedotoxin)

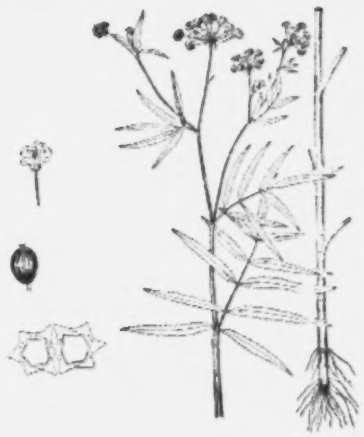
Water Hemlock

Cicuta spp.

Description: A tall marsh plant that may also occur as a weed along moist ditch edges. It is readily recognized by its clusters of thickened roots and drops of yellow oily fluid that ooze from cut tissue. Has smooth hollow stems and compound leaves with toothed leaflets. Flowers are white or greenish, in clusters. The fruit is flattened and has ribs and oil tubes. A ***highly toxic*** plant that is easily mistaken for an edible plant because its roots have a pleasant, parsnip-like odour.

Poisonous Part: Leaves, roots.

Symptoms: Stomach pain, nausea, vomiting, diarrhea, elevated temperature, dilated pupils, labored breathing, frothing at the mouth, weak and rapid pulse, tremors, delirium, violent convulsions, death; many cases of loss of human life on record. Can cause poisoning in cattle. (Internal poisoning: cicutoxin)



Water Parsnip

Sium suave

Description: Closely resembles the water hemlock. A herbaceous perennial 0.5 - 1.0 m tall that has hollow, ridged stems. The roots are spindle-shaped and grow in a cluster. The compound leaves have five or more lance-shaped leaflets with sharp serrations. Produces umbrella-shaped clusters of small white flowers. The fruits are slightly flattened and have corky ribs.

Poisonous Part: Foliage.

Symptoms: Symptoms in humans not known. Has caused livestock poisoning. (Internal poisoning: unknown)

Yellow Lady's Slipper

Cypripedium calceolus var. pubescens

Description: One to three yellow, orchid-like flowers are produced on long stems emerging from leafy bases.

Poisonous Part: Leaves, stems.

Symptoms: Mild skin irritation to painful blisters. (Dermatitis)

Wild Calla

Calla palustris

Description: Well known, but it is usually viewed from a distance because it inhabits moist, boggy areas. The oval leaves grow on long stems all coming from the base of the plant. The flowers consist of a broad leaf-like bract (spathe) behind a club-like spike (spadix). The true flowers are small and crowded evenly over the surface of the spadix. After pollination, the spathe rots away, and the spadix becomes a dense, fleshy head of orange-red berries.

Poisonous Part: All parts, particularly rhizomes.

Symptoms: Intense irritation and a burning sensation in the mouth; death has occurred in animals. (Dermatitis, internal poisoning: calcium oxalates)

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Tarweed 18
Taxus spp. 16
Thermopsis rhombifolia 17
Thlaspi arvense 18
Thorn apple 18
Tomato 2
Triglochin maritima 17
Triglochin palustris 17
Trillium 21
Trillium spp. 21
Two-leafed squill 10
Typha latifolia 22
Urginea maritima 10
Vicia faba 1
Viper's bugloss 18
Virgin's bower 13
Virginia creeper 16
Water hemlock 19, 23, 24
Water parsnip 19, 24
Western bleeding heart 3
White camas 19
Wild calla 24
Wild morning glory 17
Wild mustard 18
Wild tomato 11
Wormseed mustard 18
Xanthium strumarium 17
Yellow lady's slipper 24
Yew 16
Zygadenus elegans 19
Zygadenus gramineus 19
Zygadenus spp. 19